

A BIBLIOGRAPHY ON COMPUTER GRAPHICS

BY

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A BIBLIOGRAPHY ON COMPUTER GRAPHICS

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This bibliography includes the most important works describing the software aspects of generative computer graphics. As such it will be of most usefulness to researchers, system designers and programmers whose interests and responsibilities include the development of software systems for interactive graphical input/output. The bibliography does include a short section on hardware systems. Image analysis, pattern recognition and picture processing and related fields are rather poorly represented here. The interested researcher is referred to journals in this field and to the reports of Azriel Rosenfeld, University of Maryland, which include excellent bibliographic references.

The thesis underlying this bibliography is that interactive graphics systems should be intelligent, helpful, versatile, powerful, forgiving and easy to use. To this end I have included entries which some may feel do not properly belong in a bibliography on computer graphics. My apologies are tendered in advance.

I have attempted to be as thorough as possible in compiling the entries and in classifying them into their respective categories. Certainly errors of omission and classification have occurred; for these I apologize as well.

The format of each bibliographic entry is:

- Author
- Full title
- Primary source
- Alternate sources for same work
- # Keys under which this entry will be found

The bibliography is divided into 20 sections. Entries which fall into more than one category will generally be cross-listed under all appropriate sections. Entries are listed alphabetically by principal or first author. The entries are not cross-listed by co-authors.

AV -- Animation & Movies: contains those works related to the generation of animated films, animation systems, motion picture generation using graphics in general, and specific techniques for motion pictures. Examples of motion picture systems are also given.

AP -- Application Programs & Systems: contains those works whose primary intent is the exposition or demonstration of a production graphics system or production system utilizing computer graphics.

AS -- Associative Systems: contains works describing schemes for implementing associative data structures. It also includes entries describing associative accessing techniques such as hash-coding.

CA -- Computer Aided Design: contains works which are primarily descriptions of production design systems such as circuit design, airfoil design, structural design, etc. It also includes entries relating to data structures and specific techniques useful in implementing computer aided design systems.

CS -- Control Structures: contains those works relating to the design and use of various control structures.

DS -- Data Structures: contains those works related to the design and implementation of various data structures especially suited for computer graphics, comparisons of such data structures, storage allocation and other related techniques.

EL -- Extensible Languages: contains a brief listing of the more relevant works in this field.

HS -- Hardware, Hardware Techniques and Systems: contains those works related to hardware rather than software systems. It includes terminals, terminal systems, hardware design, hardware input/output devices, hardware techniques for stereoscopic vision and special purpose hardware for graphics.

IA -- Image Analysis, Pattern Recognition, Picture Processing: includes works in these and all related fields dealing primarily with picture recognition rather than picture generation.

LS -- Languages & Systems: contain;; those works which are primarily expositions of computer languages or systems especially designed for graphics.

EP -- Philosophy: contains those works expressing opinions on graphics in general, descriptions of experiences with graphics, descriptions of the requirements for graphics systems, etc.;

PP -- Parallel Processing: contains a brief listing of the more relevant works in this field.

PS -- Problem Solving: contains those works in this field of artificial intelligence which may be applied to graphics.

QA -- Question Answering Systems: contains those works in this field of artificial intelligence which may be applied to graphics.

SA -- Semantics & Artificial Intelligence in General: contains a variety of works dealing with the semantics of language, the semantics of data structures, implementing semantics, intelligent systems for picture recognition and generation, theorem proving, using artificial intelligence techniques to interact with systems using English, etc.

SI -- Simulation: contains a brief listing of the more relevant recent works in this field.

TE -- Techniques: contains specific techniques for attacking some portion of the problem of how one implements a computer graphics system. It includes hidden line and surface removal, data structure access techniques, mathematical techniques for modeling arbitrary surfaces, etc.

TF -- Theoretical Foundations & Mathematics: contains those works related to the formal and mathematical properties of graphical objects.

TP -- Theorem Proving: contains those works in this field of artificial intelligence which may be applied to graphics.

The researcher interested in further exploring the field is referred to the following major sources:

Communications Association for Computing Machinery
Journal Association for Computing Machinery
Computing Reviews (ACM)
IBM T. J. Watson Research Center Reports
Proc. AFIPS Spring and Fall Joint Computer Conferences
Proc. Institute of Electrical and Electronics Engineers
Proc. Annual SHARE-ACM-IEEE Design Automation Workshops
Transaction.3 Electronic Computers Group, IEEE
Computer Graphics, publication of SIGGRAPH, ACM
SIGPLAN Notices, publication of SIGPLAN, ACM
Computer Architecture News, publication of SICARCH, ACM
Doctoral dissertations: Carnegie-Mellon University,
University of Utah, Stanford University,
University of Illinois, Massachusetts Institute
of Technology, etc.

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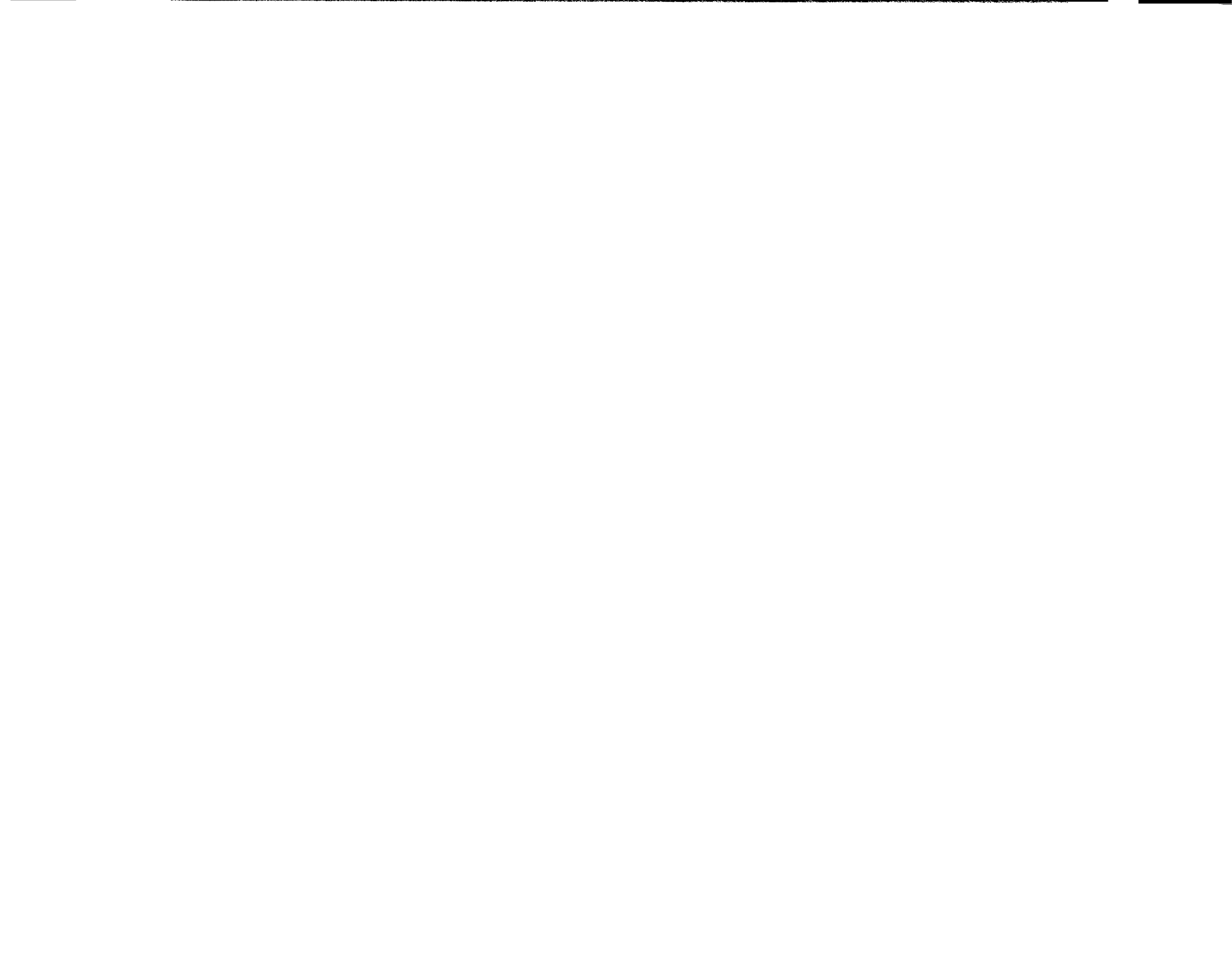
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